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Notes:

1. Untranslatable words are replaced with asterisks (****).
2. Texts in the figures are not translated and shown as it is.

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FULL CONTENTS

[Claim(s)]

[Claim 1] So that a reception control may become possible, [a data signal characterized by comprising the following which possessed a cellular phone and to which said receiving unit control section of said cellular phone was restored with said data-broadcasting receiving unit] A portable telephone function extended system using data broadcasting characterized by coming to connect said data-broadcasting receiving unit and said cellular phone.

A data-broadcasting reception means which has a data decoder from which data received from data broadcasting is changed into a digital signal.

A data-broadcasting receiving unit which contained a control means which carries out restoration control of the digital signal changed by said data-broadcasting reception means.

A receiving unit control means which carries out the reception control of the restoration digital signal received with said data-broadcasting receiving unit.

A data processing means which carries out data processing of the restoration digital signal in which the reception control was carried out by said receiving unit control means, a display control means which controls data in which data processing was carried out by said data processing means to data for a display, and a displaying means which displays said data for a display.

[Claim 2] A portable telephone function extended system using the data broadcasting according to claim 1 which is provided with the following and characterized by said data processing means carrying out data processing of said selection data based on the data format.

An input means for said cellular phone to choose User Information suitably.

An ID number memory measure which memorizes an ID number set up corresponding to said User Information.

A selection data memory measure which memorizes selection data chosen in relation to said ID number among restoration digital signals in which the reception control was carried out by said receiving unit control means.

[Claim 3] A portable telephone function extended system using the data broadcasting according

to claim 1, wherein it adds URL associated data in data of data broadcasting and said cellular phone possesses a communication control means connected to sources of information on the Internet through a telephone line based on said URL associated data.

[Claim 4]The contents of said data broadcasting are information data from a variety-of-information donor, and become as free distributed data for a user, and, [said cellular phone] A portable telephone function extended system using the data broadcasting according to claim 1 always providing a commanding means for data processing on which said free distributed data is displayed with the priority to a default window of said displaying means at the time of energization.

[Claim 5]In a data distribution method which usually distributes information data from an informant from a broadcasting station in addition to broadcast information, Said informant's URL associated data is added and distributed to said information data, A data distribution method using data broadcasting a cellular phone which received said information data connecting with sources of information on the Internet via a telephone line based on said URL associated data, and becoming as an inspection of more detailed information about said informant being possible.

[Claim 6]A data distribution method which said information data is free distributed data for a user of said cellular phone, and used the data broadcasting according to claim 5, wherein said free distributed data is always displayed with the priority to a default window at the time of energization of said cellular phone.

[Detailed Description of the Invention]

[0001]

[Field of the Invention]In this invention, a data-broadcasting receiving unit is attached or built in a cellular phone.

Therefore, the selection data of user taste can be displayed on the default window of a cellular phone among various data provided by data broadcasting, It is related with the portable telephone function extended system and data distribution method using data broadcasting which the effective advertisement according to target of can become possible to a user, can link with the Internet from the above-mentioned selection data, and can use written data broadcast effectively by this.

[0002]

[Description of the Prior Art]In recent years, at the time, the cellular phone which does not choose a place but can be used easily spreads widely, and, as for the shape, the small weight saving is progressing. On the other hand, these days, the Internet access means using a cellular phone is also spreading widely, and the cellular phone serves as an important existence of the Internet access means.

[0003]Spread also follows the device which receives data broadcasting represented by FM and

TV multiplex broadcasting, especially an FM multiplex broadcast receiving set serves as a size equivalent to the usual small radio, and the small weight saving is following it. There are a ground system digital broadcasting receiving set which will start soon, and a situation which comes out in a market as a small lightweight handheld receiver by progress of art in the future. Similarly, also about satellite system digital broadcasting, such as BS and CS, development of the receiving method in which migration reception is possible is furthered in addition to the conventional PARABONA antenna, and there may also be an appearance of a handheld receiver.

[0004]

[Problem to be solved by the invention]Being in such a situation, the information from the communication system represented by the cellular phone and the information from the broadcast system represented by data broadcasting have been independent, respectively, and correlation has not constituted them mutually. Therefore, the user has to carry two or more information terminals, in order to enjoy each information. In each device, and a portion useless as a device also has it. [much] [the function which overlaps like display capabilities or an operational function] In order to solve such a problem, it is possible to unify a cellular phone and other devices.

[0005]This invention was made in view of the situation mentioned above, can display the broadcast information which unified or connected the data-broadcasting receiving unit which is the cellular phone and broadcast system receiving set which are communication system devices, and used data broadcasting in a cellular phone, and again, It aims at providing the portable telephone function extended system and data distribution method using data broadcasting which can link with the Internet and can enable the inspection of the site of data broadcasting information.

[0006]

[Means for solving problem]In order to solve the problem mentioned above, [the invention according to claim 1] The data-broadcasting reception means which has a data decoder from which the data received from data broadcasting is changed into a digital signal, The data-broadcasting receiving unit which contained the control means which carries out restoration control of the digital signal changed by said data-broadcasting reception means, The receiving unit control means which carries out the reception control of the restoration digital signal received with said data-broadcasting receiving unit, The data processing means which carries out data processing of the restoration digital signal in which the reception control was carried out by said receiving unit control means, The display control means which controls the data in which data processing was carried out by said data processing means to the data for a display, So that the cellular phone which consists of a displaying means which displays said data for a display may be provided and the reception control of said receiving unit control section of said cellular phone may become possible about the data signal restored with said data-broadcasting receiving unit, It comes to connect said data-broadcasting receiving unit and said cellular phone. Therefore, it becomes possible to display the broadcast information which unified or connected the data-broadcasting receiving unit which is the cellular phone and

broadcast system receiving set which are communication system devices, and used data broadcasting in a cellular phone.

[0007]In the invention according to claim 2, the data broadcasting according to claim 1 in the used portable telephone function extended system, [said cellular phone] The input means for choosing User Information suitably, and the ID number memory measure which memorizes the ID number set up corresponding to said User Information, Providing the selection data memory measure which memorizes the selection data chosen in relation to said ID number among the restoration digital signals in which the reception control was carried out by said receiving unit control means, said data processing means carries out data processing of said selection data based on the data format. Therefore, the selection data of user taste can be displayed on a cellular phone among various data in data broadcasting, and also effective advertisement according to target can be performed possible to a user.

[0008]In the portable telephone function extended system using the data broadcasting according to claim 1, in the invention according to claim 3, add URL associated data in the data of data broadcasting, and, [said cellular phone] Based on said URL associated data, the communication control means connected to the sources of information on the Internet through a telephone line is provided. Therefore, it becomes possible to link with the Internet from URL and to use said data broadcasting effectively. Since it is active and is always based on an advertisement and data broadcasting which transmits so that it may advertize, Motivation which calls in a passive user is made greatly, it can perform easily increasing a user's number of visitors, and the number of times of an inspection for the company which deals with Internet business, and the effect which leads to expansion of a business opportunity also as companies, such as a sponsor of a data-broadcasting office, can expect greatly.

[0009]In the invention according to claim 4, the data broadcasting according to claim 1 in the used portable telephone function extended system, [the contents of said data broadcasting] It is information data from a variety-of-information donor, and becomes as free distributed data for a user, and said cellular phone always possesses the commanding means for data processing (26a) on which said free distributed data is displayed with the priority to the default window of said displaying means at the time of energization. Therefore, a possibility that the advertisement, advertisement, etc. of an informant will touch a user's eyes when the default window of a cellular phone flows becomes high by leaps and bounds, and considering the scale of the national number of portable telephone subscribers, the impact by the advertisement is made greatly.

[0010]In the data distribution method which usually distributes the information data from an informant from a broadcasting station in the invention according to claim 5 in addition to broadcast information, Said informant's URL associated data is added and distributed to said information data, The cellular phone which received said information data connects with the sources of information on the Internet via a telephone line based on said URL associated data, and becomes as an inspection of the more detailed information about said informant being possible. Therefore, it becomes possible to link with the Internet from URL and to use said data broadcasting effectively. Since it is active and is always based on an advertisement and

data broadcasting which transmits so that it may advertize, Motivation which calls in a passive user is made greatly, it can perform easily increasing a user's number of visitors, and the number of times of an inspection for the company which deals with Internet business, and the effect which leads to expansion of a business opportunity also as companies, such as a sponsor of a data-broadcasting office, can expect greatly.

[0011]In the invention according to claim 6, the data broadcasting according to claim 5 in a used data distribution method, [said information data] For a user of said cellular phone, it is free distributed data and said free distributed data is always displayed with the priority to a default window at the time of energization of said cellular phone. Therefore, a possibility that an advertisement, advertisement, etc. of an informant will touch a user's eyes when a default window of a cellular phone flows becomes high by leaps and bounds, and considering a scale of the national number of portable telephone subscribers, impact by the advertisement is made greatly.

[0012]In this invention, data broadcasting (for example, FM multiplex telecasting) can be received with a data-broadcasting receiving unit, and selection data which set received data by information which a user chose as an indicator of a cellular phone can be displayed. The Internet is accessed via a cellular phone based on displayed information, and access to information from a communication system also becomes possible. And data of broadcast system information is displayed on an indicator of a cellular phone which is communication system information machines and equipment, and data broadcasting is used effectively. A cellular phone does not remain in a telephone function now, but since it serves as an information tool, let it be a portable telephone function extended system in a point of expanding this information tool.

[0013]

[Mode for carrying out the invention]Hereafter, an embodiment of the invention is described using Drawings.

A. The lineblock diagram 1 of an embodiment is a block diagram showing the system structure of the whole by the embodiment of this invention. In drawing 1, A is a data-broadcasting receiving unit and B is a cellular phone. The cellular phone B performs a telephone call and a data communication via the communication line network 80 by communicating with the public base station which is not illustrated by radio. The cellular phone B can access the various servers 100,101 on the Internet 90 connected via the server on the communication line network 80 which is not illustrated. In addition to the usual broadcasting electric-wave, the data-broadcasting office 110 sends the data (an advertisement, a portal screen, a program, music, etc.) based on the contents the advertisement, information, etc. from the sponsor 120 were requested [contents] as a data-broadcasting electric wave. The sponsors 120 are a company, a record company, a fan club, etc., and exhibit data (an advertisement, a portal screen, a program, music, etc.) via the server 101 and the data-broadcasting office 110 on the Internet 90.

[0014]Next, drawing 2 is a block diagram showing the composition of data-broadcasting receiving unit A. The central processing unit (CPU) 1 for performing communication with the

cellular phone B, control of a data-broadcasting receive section, etc. is formed in the inside of this data-broadcasting receiving unit A, . [as an external storage for workspace of the antenna 2 which receives a data-broadcasting electric wave, the data-broadcasting receive section 3 which consists of the tuner section 3a and the data decoder part (DARC) 3b, and the above-mentioned central processing unit (CPU) 1] . [as LCD6 used for the serial interface 5, such as **SRAM4 and RS-232C as a serial communication interface device, frequency, the display of an established state, etc., and a control switch (channel selection)] It has the reset switch 8 as the ** switch 7 and an initialization switch of the above-mentioned central processing unit (CPU) 1, the earphone terminal 9 for radios, and the connector 10 that electrically connects the above-mentioned cellular phone B and written data broadcast receiving unit A. LED14, such as ON/OFF etc. of the crystal oscillator 11 of the external clock for the above-mentioned central processing units (CPU) 1, the power supply 12 for a drive of written data broadcast receiving unit A, the power supply circuit 13 that supplies the stable voltage to written data broadcast receiving unit A, and a power supply, is provided, respectively. With the control means in a claim, the above-mentioned central processing unit (CPU) 1 and SRAM4 grade are contained. The above-mentioned antenna 2 and the above-mentioned earphone terminal 9 may be unified.

[0015]Separation Sub-Division of the electric wave (in the case [For example, the case of an FM multiplex broadcast 76MHz-90MHz:] of Japan) received from the antenna 2 is done to a voice part and a data division by the data-broadcasting receive section 3. That is, the voice part of the received electric wave is detected by the tuner section 3a, from the earphone terminal 9, serves as a sound and is outputted. Data is changed into a digital signal by the data decoder part 3b. This digital signal has 16K bps data speeds, and is inputted into the central processing unit (CPU) 1, for example. In this central processing unit (CPU) 1, error amendment of the above-mentioned digital signal is given in SRAM4, and the restored digital signal is sent to the external connection terminal 20 of the above-mentioned cellular phone B via the serial interface 5 and the connector 10.

[0016]Next, drawing 3 is a block diagram showing the composition of the above-mentioned cellular-phone B relation. This block diagram shows the type with which data-broadcasting receiving unit A was built in this cellular phone B. The above-mentioned cellular phone B is equipped with the telephone function basic control part (CPU) 21. The receiving unit control section 22 which carries out the reception control of the restoration digital signal by written data broadcast receiving unit A is formed in the cellular phone B. A digital signal is controlled to specifically become HDML (specification of a personal digital assistant-oriented markup language) carried in the cellular phone B, and the format of WAP2 (Wireless Application Protocol 2).

[0017]Although the input part 23 for choosing User Information as the cellular phone B suitably, and inputting it into it is formed, that by which this is already provided in the cellular phone B is used. The storage parts 24, such as an ID number by which setting memory is carried out corresponding to the input back, are formed in above-mentioned User Information. Specifically, an ID number is registered into the terminal of the data-broadcasting office 110 as

a user's attribution information. That User Information is a user's address, age, sex, interested fields, information (case index) needed, etc., and the storage parts 24, such as an ID number, memorize for every User Information ID number of this.

[0018]The selection data storage part 25 which memorizes the selection data based on the User Information is formed in the cellular phone B. When the above-mentioned selection data is alphabetic data, object data processing is carried out, and when the above-mentioned selection data is image data, the data processing part 26 by which bitmap data processing is carried out is formed in the cellular phone B. The display control part 27 by which the conversion process of the written data is carried out to the data for a display is formed. This display control part 27 is a thing which is made into the display FO mart of the cellular phone B by HDML, HTML, and WAP2 grade and to control. The data for a display processed by the above-mentioned display control part 27 is displayed on the default window 28a of the indicator 28 of the cellular phone B. The block diagram shown in drawing 3 is not what summarized each treating part, the storage part, and the control section tidily, but is a figure which ringing control is serially carried out toward a top from under the white arrow group on the right-hand side of the figure, and made this intelligible.

[0019]The commanding means 26a for data processing for the written data treating part 26 to process selection data preferentially is formed in the cellular phone B. By this, when the power supply of the cellular phone B is started, the commanding means 26a for written data processing operates, The above-mentioned selection data stored in the selection data storage part (RAM) 25 is processed by the data processing part 26 and the display control part 27, and it changes into the data for a display, and it is displayed so that it may mention later to the default window 28a of the indicator 28 of the cellular phone B.

[0020]Drawing 5 is the type which carried out external [of the written data broadcast receiving unit A] to the cellular phone B, and it is only providing serial interface 5 grade in a connection part technically, and since other composition is the same as that of drawing 3, the same numerals are attached to a corresponding portion and explanation is omitted.

[0021]B. Explain operation of this whole embodiment in detail with reference to operation of an embodiment, next a flow chart shown in drawing 4. A business subject is also indicated in addition to a flow of a signal, and it was made useful for business model understanding in this flow chart.

[0022]First, a user is the input part 23 of the cellular phone B which data-broadcasting receiving unit A possesses, and is User Information. [An address, age, sex, interested fields, information (case index) needed, etc.] are registered (S1). Thereby, User Information relevant to an ID number and this number is registered into a terminal of the data-broadcasting office 110 as a user's attribution information to each user (S2). By this, the data-broadcasting office 110 can grasp user choice information for every ID number beforehand added to written data broadcast receiving unit A. Data (an advertisement, a portal screen, a program, music, etc.) based on contents requested by the sponsor 120 under such a state is sent as a data-broadcasting electric wave from the data-broadcasting office 110. That is, data distribution of the information is carried out (S3). And it is received by the antenna 2 of data-broadcasting

receiving unit A in the cellular-phone B side (S4). Then, it is distinguished whether it is data (S5). In the case of a broadcasting electric-wave instead of data, by the tuner section 3a, digital detection is carried out (S6) and voice response of this broadcasting electric-wave is carried out from an earphone (S7).

[0023]When the electric wave is data, it is changed into a digital signal in the data decoder part 3b of written data broadcast receiving unit A, and restoration control of this digital signal is carried out (S8). The restored data is transmitted into the above-mentioned cellular phone B via the external connection terminal 20, only the selection data according to each user is chosen at this time, and it stores temporarily at the selection data storage part 25 in the cellular phone B (S9). In this state, at the time of the power supply input of the cellular phone B, data processing is carried out (S10), and indicative-data processing is carried out, and it is changed into the data for a display (S11), and is displayed on the indicator 28 of the cellular phone B (S12). namely, -- a user sets to the cellular phone B at the time of a power supply input -- always -- selection data -- reception of the data of an advertisement, a portal screen, a program, music, etc. being started, and usually, although the cellular phone B serves as the default window 28a, [un-talking over the telephone] [the cellular phone] It becomes the menu screen 28b of the indicator 28 of the cellular phone B, and is displayed. Based on User Information for every registered ID number, the data-broadcasting office 110 side prepares proper menus (news, information on a hobby, communication portal information, etc.), and a user chooses the contents of this menu screen 28b from the inside.

[0024]As shown in drawing 6, specifically, they are news, mobile banking, fan club communication, a gourmet recipe, URL (Uniform Resource Locator), an emergency dial, an advertisement, etc. In this menu screen 28b, user choice information can be acquired by selecting a proper menu. The advertisement relevant to the user choice information by the side of the data-broadcasting office 110 also in the thing of kinds other than an advertisement is added among this user choice information in many cases. Even if it is at the telephone call time, the selection data sent from data broadcasting continues, is received, and is stored temporarily at the selection data storage part 25. [composition i.e., the array order, a foreground color, etc. of the menu screen 28b] If it is what a user can remake if needed and a user chooses items other than the advertisement of this menu, the selection data corresponding to that item will be read from the selection data storage part 25, and will be displayed. The selection data storage part 25 is discarded one by one from data old after the field corresponding to each menu is provided, receive data is memorized one by one in each field and selection data is memorized to the whole field, and new data is memorized. Or after specifying specific time, making only the receive data after it memorize and memorizing to the whole field, it may be made to stop the addition and renewal of stored data.

[0025]When a user gets interested to a menu content of the menu screen 28b of selection data, by choosing URL which has communication portal information, it is connected Internet 90 (S13) and detailed information can be received via a communication enterprise (S14). This action leads to expansion of E-business etc. and can pull out a merit to a sponsor.

[0026]

[Effect of the Invention][that what needed to carry the information terminal equipment of former plurality by equipping a cellular phone with a data-broadcasting receiving unit in the invention of Claim 1 unifies as explained above] The advantage that concentration-izing of a function and the convenience of a cellular phone can be raised, and the data from data broadcasting can be displayed on the indicator of a cellular phone by the easy operation from a cellular phone is acquired.

[0027]In the invention of Claim 2, the data from data broadcasting, [the easy operation from a cellular phone] The selection data of user taste can be displayed on the indicator of a cellular phone among various data provided by data broadcasting, and the advantage that this can perform effective advertisement according to target to a user is acquired. That is, considering the distribute information side, efficiency [say / distribution only in the specific group which has interest] is long, and the advertising effectiveness in low cost is acquired by ID number addition. As mentioned above, in this invention, propaganda effect expectation for a pushed type and specific groups can be performed.

[0028]If this effect is explained in full detail, when data information flows into the default window of a cellular phone, considering a data-broadcasting office side or the sponsor side, If a possibility of touching a user's eyes becomes high by leaps and bounds and considers the scale of the national number of portable telephone subscribers, the advertising impact will be large and expectation of the media advertising effect can fully be performed. In respect of cost, it is a using-data distribution of data broadcasting thing, and there is an advantage which can be managed with low cost as compared with charges of an advertisement request, such as television, advertising media called a cellular phone without former is newly made, and a new business model can be provided. Thus, when a cellular phone accepting-station-izes, there are also pushed type information and an advantage which multi-channel-ization is realized and leads to listeners' etc. expansion. exploitation of the sponsor of the net-related company which was not seen before and an individual sponsor's exploitation can also be performed. It is also possible to establish an individual creation program by selling by the piece of the time basis of a program. Increase of the advertising revenue by the increase in the number of sponsor enterprises of a data-broadcasting office and the increase in the number of advertisement requests or an electric wave use income can be aimed at.

[0029]In the conventional portable telephone function, the user was not able to acquire information, unless it caused operation actively. However, it becomes possible to acquire information in real time moreover passively by the system of this invention. It works on the mental side that it can use for a user comfortably by this, and using frequency increases. By a user's cellular-phone using frequency increasing from a user merit, and leading to the increase in the number of users, and the number of members, and also enriching the contents of contents, according to the increase in using frequency, if a user's communication utility time increases, a telephone rate will be made to increase and it will get.

[0030]As a communication enterprise, differentiation of a cellular phone and the increase in a terminal number can be aimed at, by giving the added value of data broadcasting to a cellular phone, differentiation with other cellular phones can be attained and there is also an

advantage which is made to also increase a terminal number by that cause and in which it deals. There is also an advantage which can perform distribution of the emergency intelligence in a disaster emergency as contents of a social contribution. Thus, by ID number pertinent information, the information, including the event meeting of the area, information, etc., for which the data local station originated in local, respectively can be distributed.

[0031]In the invention of Claim 3, it can tie also to the Internet from a cellular phone, and much more new business model can be provided. That is, it is difficult for a company to call in a user on the Internet at its site. A certain motivation is required. In advertisement on a network, unless a user connects communication, advertisement is impossible, but it is automatically transmitted to a cellular phone not related at a communication interface, and always active advertisement is possible for the system of this invention. Motivation which calls in this user it is active and is always a passive attitude because of an advertisement and data broadcasting which transmits so that it may advertize is made greatly. For this reason, it can perform easily increasing a user's number of visitors, and the number of times of an inspection for the company which deals with Internet business. As companies, such as a sponsor of a data-broadcasting office, the effect which leads to business opportunity expansion is expectable by leading to such a network.

[0032]Since it had become as free distributed data for the user, in the conventional system, the information on cellular-phone use is acquired via communication, and it was standard tactics that communication charges are indispensable, but. [the invention of Claim 4] In the system of this invention, there is the greatest advantage that can obtain information for free as a user. [the default window of the indicator in said cellular phone] [by always displaying said free distributed data preferentially at the time of energization] It can connect to the expansion to the sponsor of a data-broadcasting office, and increase of the user convenience of a cellular phone, and the business model which produces an effect very useful also for a data-broadcasting office, a sponsor, and a user can be provided. The communication charges of the conventional search time are omissible by using the navigation function of the default window of a cellular phone. In addition, since it is possible to also acquire general information, including news, a weather report, etc., communication charges are omissible similarly.

[0033]In Claim 5, the advantage which even a carrier can provide with the business model which produces a useful effect by having enabled it to peruse the information from said informant in details more via the Internet is acquired from URL. That is, it is difficult for a company to call in a user on the Internet at its site. A certain motivation is required. In advertisement on a network, unless a user connects communication, advertisement is impossible, but it is automatically transmitted to a cellular phone not related at a communication interface, and always active advertisement is possible for the system of this invention. Motivation which calls in this user it is active and is always a passive attitude because of an advertisement and data broadcasting which transmits so that it may advertize is made greatly. For this reason, it can perform easily increasing a user's number of visitors, and the number of times of an inspection for the company which deals with Internet business. As companies, such as a sponsor of a data-broadcasting office, the effect which leads to business

opportunity expansion is expectable by leading to such a network.

[0034] Since it had become as free distributed data for the user, in the conventional system, the information on cellular-phone use is acquired via communication, and it was standard tactics that communication charges are indispensable, but. [the invention of Claim 6] In the system of this invention, there is the greatest advantage that can obtain information for free as a user. [the default window of the indicator in said cellular phone] [by always displaying said free distributed data preferentially at the time of energization] It can connect to the expansion to the sponsor of a data-broadcasting office, and increase of the user convenience of a cellular phone, and the business model which produces an effect very useful also for a data-broadcasting office, a sponsor, and a user can be provided. The communication charges of the conventional search time are omissible by using the navigation function of the default window of a cellular phone. In addition, since it is possible to also acquire general information, including news, a weather report, etc., communication charges are omissible similarly.

[Brief Description of the Drawings]

[Drawing 1] It is a block diagram showing the system structure of the embodiment of this invention.

[Drawing 2] It is a block diagram showing the composition of the main data-broadcasting receiving units of this invention.

[Drawing 3] It is a block diagram showing the composition of the cellular phone of this invention, and a data-broadcasting receiving unit.

[Drawing 4] It is a flow chart for explaining operation of the embodiment of this invention.

[Drawing 5] It is a block diagram showing another composition of the cellular phone of this invention, and a data-broadcasting receiving unit.

[Drawing 6] It is a mimetic diagram of the menu screen of selection data at the display screen of a cellular phone.

[Explanations of letters or numerals]

A Data-broadcasting receiving unit

B Cellular phone

1 CPU (control means)

2 Antenna

3 Data-broadcasting receive section (data-broadcasting reception means)

3a Tuner section

3b Data decoder part

4 SRAM

5 Serial interface

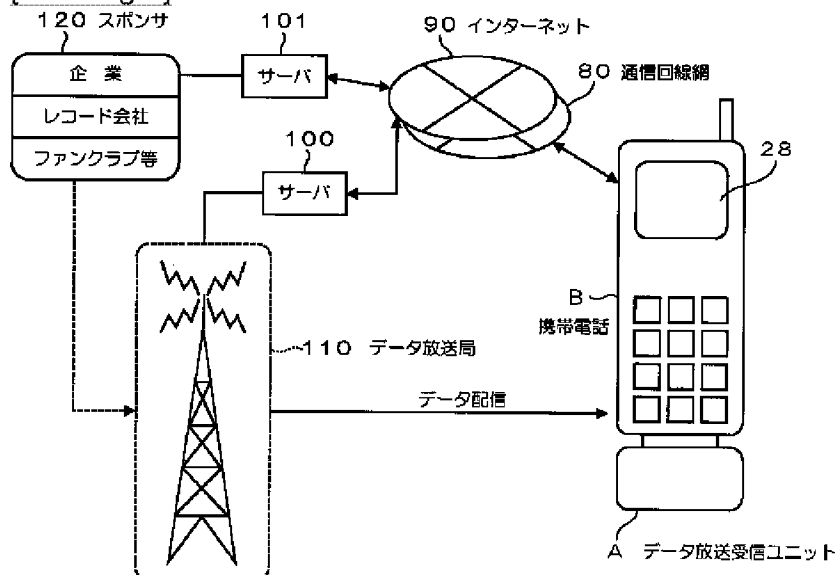
6 LCD

7 Switch

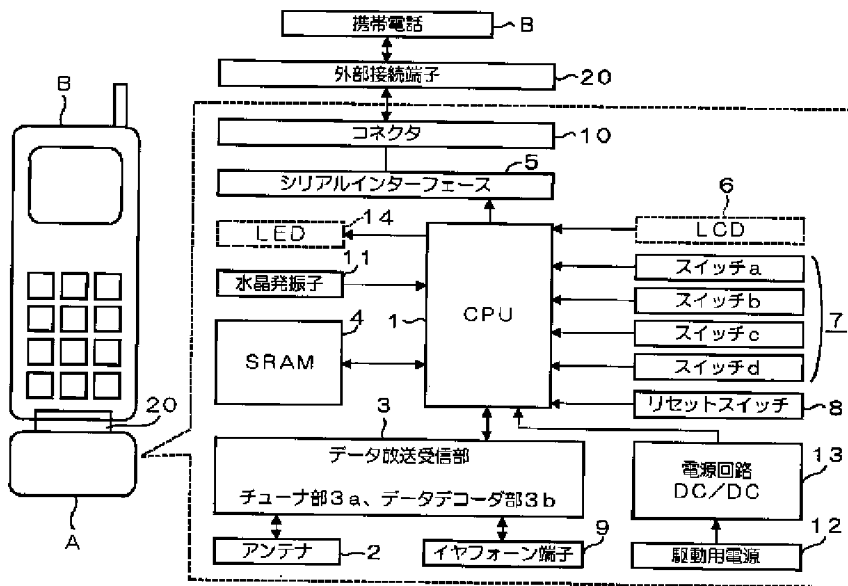
8 Reset switch

- 9 Earphone terminal
- 10 Connector
- 11 Crystal oscillator
- 12 Power supply for drive
- 13 Power supply circuit (DC/DC)
- 14 LED
- 20 External connection terminal
- 21 Telephone function basic control part (communication control means)
- 22 Data-broadcasting receiving unit control section (receiving unit control means)
- 23 Input part (input means)
- 24 Storage parts, such as ID number (ID number memory measure)
- 25 Selection data storage part (selection data memory measure)
- 26 Data processing part (data processing means)
- 26a The commanding means for data processing
- 27 Display control part (display control means)
- 28 Indicator (displaying means)
- 28a Default window
- 28b Menu screen
- 80 Communication line network
- 90 Internet
- 100,101 Server
- 110 Data-broadcasting office
- 120 Sponsor (informant)

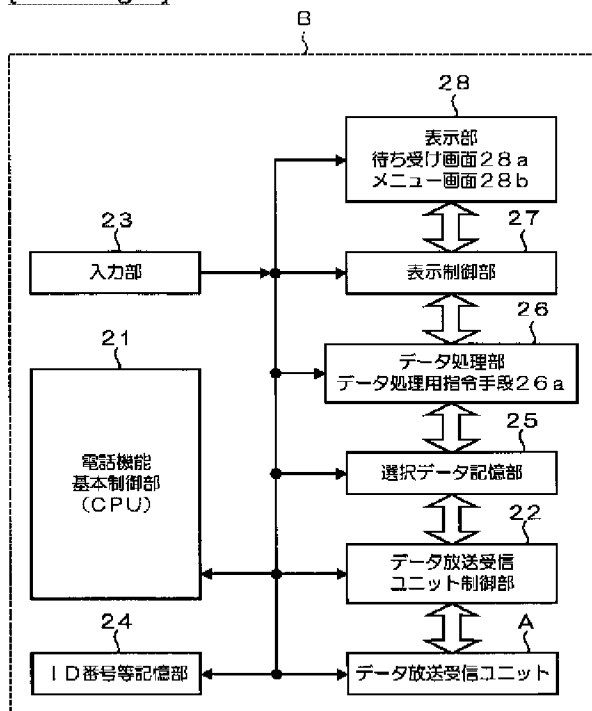
[Drawing 1]



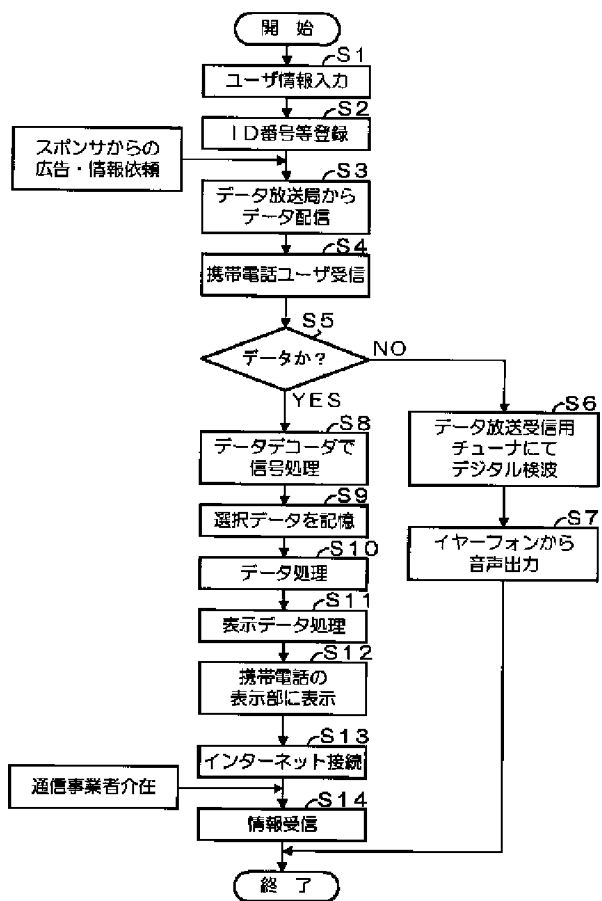
[Drawing 2]



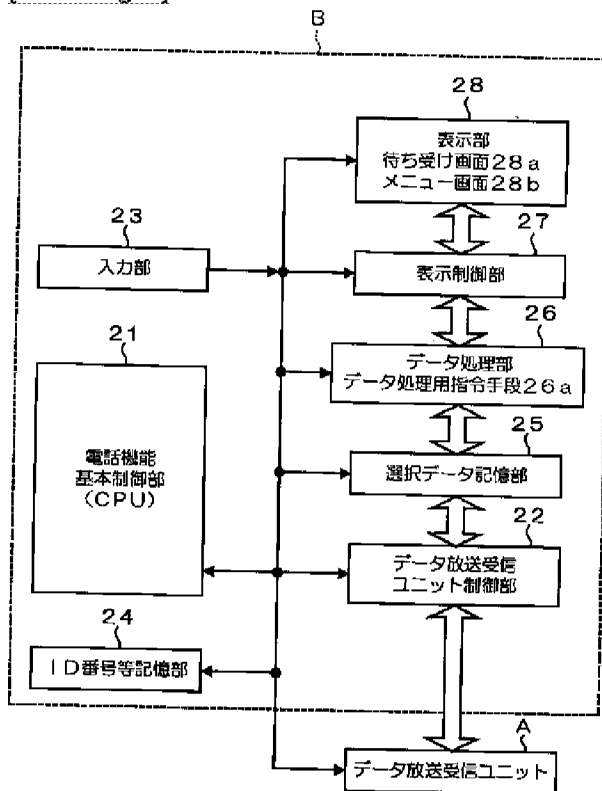
[Drawing 3]



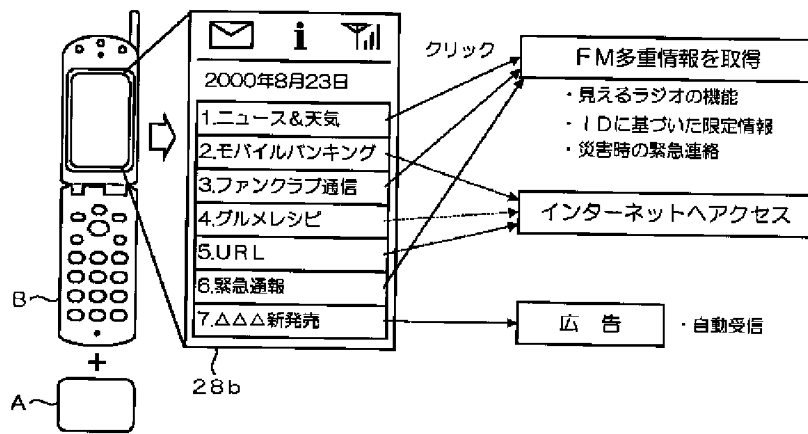
[Drawing 4]



[Drawing 5]



[Drawing 6]



[Translation done.]